

LISTING OF CLAIMS

The following listing of claims will replace all prior versions, and listings of claims in the application:

1. **(Currently amended)** A method for transducing a human neuron with a heterologous gene, wherein said human neuron has a synaptic portion and a cellular portion, comprising:

providing at least 1.5×10^7 infectious particles of an adeno-associated viral vector comprising a heterologous gene to be transduced into a human neuron; and

contacting the synaptic portion of said human neuron with said viral vector under conditions whereby said contacting results in transduction of the viral vector into said synaptic portion, and retrograde movement of said viral vector from the synaptic portion to the cellular portion, wherein said heterologous gene is incorporated into the genome of the human neuron and expressed by said human neuron for at least two months.

2. **(Previously presented)** The method of Claim 1, where said viral vector exhibits tropism toward human neurons.

3. **(Canceled).**

4. **(Original)** The method of Claim 1, wherein said method is performed *in vivo*.

5. **(Canceled).**

6. **(Original)** The method of Claim 1, wherein at least 1.5×10^8 infectious particles of said viral vector are provided.

7. **(Original)** The method of Claim 1, wherein at least 1.5×10^9 infectious particles of said viral vector are provided.

8. **(Canceled).**

9. **(Previously presented)** The method of Claim 1, wherein said gene is further expressed by said human neuron for at least four months.

10-27. **(Canceled).**